

Remarks

Examiner Pompey is thanked for the thorough Office Action.

In the Claims

Claim 10 has been amended to correct a typographical error introduced in the previous office action response to indicate that it actually depends from independent claim 6 as evidenced in the claims as filed. This amendment is not related to patentability.

Claim 14 has been amended to clarify that the oxidizing environment is a dry oxidizing environment. This amendment is believed to not be related to patentability.

Claims 15 and 16 are new and have been added to better encompass the full scope and breadth of the invention notwithstanding the patentability of the original claims. Specifically, claim 15 depends from independent claim 6; claim 16 depends from independent claim 11; and each claim provides ranges for the first and second temperatures.

Claim Rejections

The Rejection Of Claims 6 And 8 To 14 Under 35 U.S.C. §103(a) as Being Unpatentable Over Higashitani et al. (U.S. Patent No. 5,637,528)

The rejection of claims 6 and 8 to 14 under 35 U.S.C. §103(a) as being unpatentable over Higashitani et al. (U.S. Patent No. 5,637,528) (the '528 Higashitani Patent) is acknowledged.

Applicants' wish to briefly point up the claimed features of their invention which are believed to be not shown nor obvious from the teachings of known references in this field. Pending independent claims 6 and 11 both clearly define locally oxidizing a silicon (semiconductor) substrate through a patterned silicon nitride mask layer at a first temperature above 1100°C to form FOX isolation layers which prevent out-gassing of nitrogen species from the silicon nitride mask and then oxidizing the silicon (semiconductor) substrate further at a second temperature no greater than 1100°C.

The '528 Higashitani Patent on the other hand discloses (as shown in Fig. 2A for example) an oxidation process at about 1000°C followed by another oxidation process at about 1125°C which does not render the claimed limitations of the instant invention of employing a first oxidation process at least above (about) 1100°C followed by a second oxidation process no greater than (about) 1100°C.

The Examiner's attention is directed to column 4, lines 36 to column 5, line 10 of Higashitani. "FIG. 2A is a sequence diagram of temperatures and gases used in the oxidation process described with FIG. 1C." Therefore, Fig. 2A shows the actual temperatures used. The Examiner points to column 1, line 60 to column 2, line 6 wherein Higashitani states "It is preferable that the first and second oxidation steps (b) and (c) are performed in a temperature range from 950° C. to 1200° C." (sic) While this may be factually true, it is not accurate as Fig. 2A illustrates the actual temperatures used which do not disclose the claimed first and second temperatures of the instant claimed invention. There is not motivation in the prior art to modify Higashitani in a manner to meet the claims in the instant invention. Higashitani actually teaches away from the instant claimed invention.

Analogously, it is factually correct for one to say that the first and second temperatures of the instant invention range from 950° to about 1300°C, the instant invention clearly does not teach a first temperature of about 950° and a second temperature of about 1300°C.

Thus independent claims 6 and 11 distinguish over Higashitani under §103(a) for the above reasoning and further because, inter alia: the prior art lack a suggestion that the reference should be modified in a manner required to meet the claims; the invention is contrary to the teaching of the prior art—that is, the invention goes against the grain of what the prior art teaches; and the Examiner has not presented a convincing line of reasoning as to why the claimed subject matter as a whole, including its differences over the prior art, would have been obvious.

Claims 8 to 10 and 15 depend from independent claim 6; and claims 12 to 14 and 16 depend from independent claim 11; and are believed to distinguish over the combination for the reasons previously cited.


Therefore claims 6 and 8 to 16 are submitted to be allowable over the cited references and reconsideration and allowance are respectfully solicited.

CONCLUSION

In conclusion, reconsideration and withdrawal of the rejections are respectively requested. Allowance of all claims is requested. Issuance of the application is requested.

It is requested that the Examiner telephone Stephen G. Stanton, Esq. (#35,690) at (610) 296 – 5194 or the undersigned attorney/George Saile, Esq. (#19,572) at (845) 452 – 5863 if the Examiner has any questions or issues that may be resolved to expedite prosecution and place this Application in condition for Allowance.

Respectively submitted,

A handwritten signature in black ink, appearing to be 'S. Ackerman', is written over a horizontal line.

Stephen B. Ackerman

Reg. No. 37,761